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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO.       |
|---|-------------|----------------------|-------------------------|------------------------|
| 10/781,645  | 02/20/2004  | Takahiro Goto        | Q79923                  | 2125                   |
| 23373   | 7590        | 11/16/2007           |                         |                        |
| SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      | EXAMINER<br>LEE, SIN J  |                        |
|   |             |                      | ART UNIT<br>1795        | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>11/16/2007 | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/781,645 | <b>Applicant(s)</b><br>GOTO, TAKAHIRO |  |
|                              | <b>Examiner</b><br>Sin J. Lee        | <b>Art Unit</b><br>1795               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-6 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-6 and 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. In view of the amendment, previous 103(a) rejection over Nakamura et al (EP'196) in view of Oshima (EP'467) is hereby withdrawn.
2. In view of the newly cited prior arts, the following rejections are made non-final.

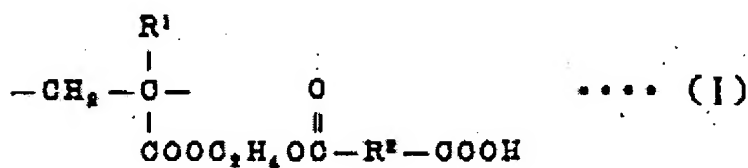
#### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 4-6 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (EP 1 223 196 A2) in view of Nagasaka et al (JP 58-134629 and its English abstract from JPO).

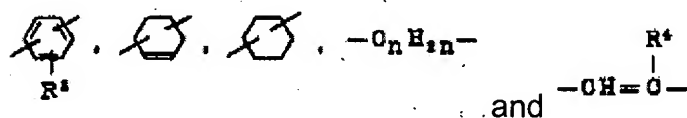
Nakamura teaches a negative image-recording material used to make a printing plate, wherein the negative image-recording material comprises a cyanine IR absorbent, a radical generator, a radically polymerizable compound and a polymer binder (abstract, [0088]-[0096], claims 1 and 29). The IR absorbents of formula (3), (3-1), IR-1, IR-2 and IR-5 meet the present limitations for the presently claimed infrared absorbing compound. A sulfonium salt is among the preferred radical generators and is represented by general formula (V) (claims 15-20, [0066]-[0069]). In general formula (V), R32, R32 and R33 are optionally substituted hydrocarbon groups (such as aryl groups – see pg.28 and 29) having at most 20 carbon atoms. Examples of substituents include halogen atoms. Nakamura does not exemplify a sulfonium salt having three aryl groups at least two of which are substituted specifically with chlorine atom. However, it would have been obvious to one skilled in the art to incorporate any halogen substituent

including chlorine atoms onto the aryl groups with a reasonable expectation of obtaining a printing plate having good printing durability. Other preferred radical generators include iodonium salts and diazonium salts, which can be used alone or in combination of two or more (claims 15-20, [0066]-[0072]). Linear organic polymers soluble or swellable in water or weakly alkaline water are preferred as the binder polymer ([0088]). Nakamura does not teach the binder polymer required in the present claim.

Nagasaka teaches the use of the following binder polymer



, in which R<sup>2</sup> can be represented by the following groups



, in an image-forming photopolymerizable composition in order to obtain an image-forming photopolymerizable composition superior in adhesion and abrasion resistance (see col.1, pg.155 of Japanese document and JPO English abstract). Therefore, it would have been obvious to one skilled in the art to use Nagasaka's binder polymer of formula (I), in which R<sup>2</sup> is

$-\text{O}_n\text{H}_2\text{n}-$  (n is 2 or 3), in Nakamura's composition so as to obtain a negative image-recording material composition superior in adhesion and abrasion resistance. Such

polymer teaches present polymer of formula (i) as well as present polymer of claim 19. According to Nakamura, especially preferred supports of the image forming material are aluminum supports having a center line average roughness between 0.1 and 1.2  $\mu\text{m}$  ([0116]-[0127]). Therefore, Nakamura in view of Nagasaka would render obvious present inventions of claims 4-6 and 10-19.

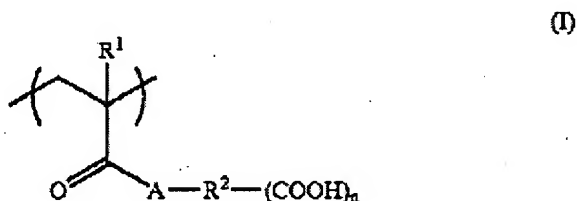
5. Claims 4-6 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (EP 1 223 196 A2) in view of Shimada (US 2004/0137369 A1).

Nakamura teaches a negative image-recording material used to make a printing plate, wherein the negative image-recording material comprises a cyanine IR absorbent, a radical generator, a radically polymerizable compound and a polymer binder (abstract, [0088]-[0096], claims 1 and 29). The IR absorbents of formula (3), (3-1), IR-1, IR-2 and IR-5 meet the present limitations for the presently claimed infrared absorbing compound. A sulfonium salt is among the preferred radical generators and is represented by general formula (V) (claims 15-20, [0066]-[0069]). In general formula (V), R32, R32 and R33 are optionally substituted hydrocarbon groups (such as aryl groups – see pg.28 and 29) having at most 20 carbon atoms. Examples of substituents include halogen atoms. Nakamura does not exemplify a sulfonium salt having three aryl groups at least two of which are substituted specifically with chlorine atom. However, it would have been obvious to one skilled in the art to incorporate any halogen substituent including chlorine atoms onto the aryl groups with a reasonable expectation of obtaining a printing plate having good printing durability. Other preferred radical generators include iodonium salts and diazonium salts, which can be used alone or in combination

of two or more (claims 15-20, [0066]-[0072]). Linear organic polymers soluble or swellable in water or weakly alkaline water are preferred as the binder polymer ([0088]).

Nakamura does not teach the binder polymer required in the present claim.

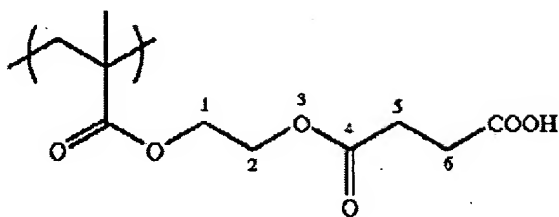
Shimada teaches (see [0055]-[0059] and [0065]) the use of the following binder



[0058] (In the formula (I), R<sup>1</sup> represents a hydrogen atom or a methyl group; R<sup>2</sup> represents a linking group containing at least two of a carbon atom, a hydrogen atom, an oxygen atom, a nitrogen atom and a sulfur atom and carrying 2 to 82 atoms; A represents an oxygen atom or —NR<sup>3</sup>— wherein R<sup>3</sup> represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 10 carbon atoms; and n represents an integer of from 1 to 5.)

[0059] With regard to the binder polymer having a repeating unit represented by the aforementioned formula (I) in the polymerizable composition of the present invention, the number of the atoms composing the main skeleton of the linking group represented by R<sup>2</sup> is preferably 1 to 30, and more preferably the linking group represented by R<sup>2</sup> should have an alkylene structure or such a structure in which an alkylene structure is linked via an ester bond.

, which examples include the following binder



Shimada teaches that by using such binder, development can be performed with water. Therefore, it would have been obvious to one skilled in the art to use Shimada's binder shown above in Nakamura's composition so that development can be performed with water. Such polymer teaches present polymer of formula (i) as well as present polymer of claim 19. According to Nakamura, especially preferred supports of the image forming material are aluminum supports having a center line average roughness between 0.1 and 1.2 um ([0116]-[0127]). Therefore, Nakamura in view of Shimada would render obvious present inventions of claims 4-6 and 10-19.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Application/Control Number:  
10/781,645  
Art Unit: 1795

Page 7

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Lee*

S. Lee  
November 14, 2007

*Sin Lee*

**SIN LEE  
PRIMARY EXAMINER**